

WHAT IS CLAIMED IS:

1. A webbing retractor for an elongated, strip-shaped webbing belt used for application to a body of a vehicle occupant, the webbing retractor comprising:
 - a take-up shaft for taking the webbing belt up around itself, which take-up shaft is rotatably held, and to which one end of the webbing belt is anchored;
 - a driven shaft connected to the take-up shaft;
 - a prime mover rotating body rotatably supported relative to and coaxially with the driven shaft;
 - a rotating member supported coaxially with both the prime mover rotating body and the driven shaft, and rotatable relative to both the prime mover rotating body and the driven shaft;
 - an urging member, attached to the prime mover rotating body, for urging the rotating member in a direction of rotation of the prime mover rotating body when the prime mover rotating body is rotated;
 - connecting members for connecting the prime mover rotating body and the driven shaft, by interlocking with relative rotation of the rotating member with respect to the prime mover rotating body, so as to transmit rotation of the prime mover rotating body to the driven shaft;
 - a driving mechanism, including a drive source, for driving rotation of the prime mover rotating body in a predetermined direction; and
 - a braking mechanism for braking rotation of the rotating member such that relative rotation of the rotating member with respect to the prime mover rotating body arises.

2. The webbing retractor of claim 1, wherein the driven shaft is rotatably connected integrally with the take-up shaft.
3. The webbing retractor of claim 1, wherein the urging member has one end and another end and is elastically deformable, and the one end is attached to the prime mover rotating body, and the other end is held at the rotating member so as to be able to push the rotating member.
4. The webbing retractor of claim 1, wherein the urging member has a coil spring.
5. The webbing retractor of claim 1, wherein the driven shaft has a peripheral surface, and the connecting members are held at the prime mover rotating body so as to be able to approach and move away from the driven shaft, and when the prime mover rotating body is rotated, the connecting members contact the peripheral surface of the driven shaft due to the relative rotation, and connect the prime mover rotating body and the driven shaft.
6. The webbing retractor of claim 5, wherein a plurality of teeth are formed at the peripheral surface of the driven shaft, and the connecting members have pawl shapes which can engage with any of the teeth, and at least one of the connecting members contacts the tooth of the driven shaft so as to engage with the tooth, and connects the prime mover rotating body and the driven shaft.
7. The webbing retractor of claim 5, wherein the connecting members are roller-shaped, and due to the relative rotation, the connecting members are pressed by

the peripheral surface of the driven shaft and connect the prime mover rotating body and the driven shaft, and rotation of the prime mover rotating body is thereby transmitted to the driven shaft.

8. The webbing retractor of claim 1, wherein, due to the braking mechanism applying frictional force to the rotating member, rotation of the rotating member is braked.

9. The webbing retractor of claim 1, wherein the braking mechanism brakes the rotating member when the prime mover rotating body is driven to rotate at greater than a predetermined speed.

10. The webbing retractor of claim 1, wherein the braking mechanism connects the driving mechanism such that motion of the braking mechanism for braking can be transmitted from the driving mechanism.

11. The webbing retractor of claim 1, wherein the braking mechanism brakes the rotating member interlockingly with driving rotation of the prime mover rotating body by the driving mechanism.

12. The webbing retractor of claim 1, wherein the rotating member has a friction member which is attached to the rotating member and rotates integrally with the rotating member, and the braking mechanism has a braking member which slidably contacts the friction member, and the braking mechanism brakes due to the braking member slidably contacting the friction member.

13. The webbing retractor of claim 12, wherein the friction member is substantially ring shaped, and the braking member is substantially shaped as a ring having one end and another end, and the braking member is disposed so as to surround one portion of an outer peripheral surface of the friction member, and in a state in which the one end of the braking member is held at the outer peripheral surface of the friction member, the other end of the braking member is connected to the driving mechanism and is pulled in a direction of decreasing a diameter of the braking member when the driving mechanism operates.

14. The webbing retractor of claim 12, further comprising a frame which is fixed, and the friction member is substantially ring shaped, and the braking member is substantially shaped as a ring having one end and another end, and the braking member is disposed so as to surround one portion of an outer peripheral surface of the friction member, and in a state in which the one end of the braking member is held at the outer peripheral surface of the friction member, the other end of the braking member is anchored at the frame so as to be pulled in a direction of decreasing a diameter of the braking member when the friction member is rotated.

15. The webbing retractor of claim 1, wherein the prime mover rotating body has an external gear which is ring shaped and has external teeth for connection to the driving mechanism such that the external gear can be driven and rotated; a base portion having a holding portion for holding the plurality of connecting members, the base portion being pivotally supported coaxially with the rotating member; and at least one torque limiter provided between the external gear and the base

portion, so as to be able to transmit torque in a predetermined range to the base portion from the external gear.

16. The webbing retractor of claim 1, further comprising a control unit for controlling operation of the driving mechanism, wherein the control unit effects control so as to cause the driving mechanism to operate when a rate of change in deceleration at a time when the vehicle decelerates is greater than or equal to a predetermined value.

17. The webbing retractor of claim 1, further comprising a control unit for controlling operation of the driving mechanism, wherein the control unit effects control so as to cause the driving mechanism to operate when a distance to an obstacle which is positioned ahead of the vehicle is less than a predetermined value.

18. A webbing retractor for a webbing belt, the webbing retractor having a take-up shaft, and by rotating the take-up shaft in one direction, the webbing retractor takes-up and accommodates, on the take-up shaft and from a proximal end side, a webbing belt which is elongated and strip-shaped and which is applied to a body of a vehicle occupant so as to restrain the body and which has a distal end and a proximal end, and due to the webbing belt being pulled toward a distal end side, the webbing retractor rotates the take-up shaft in another direction, and the webbing belt, which is taken-up on the take-up shaft, is pulled out, the webbing retractor comprising:

a driven shaft connected to the take-up shaft coaxially and integrally;

a prime mover rotating body which is substantially ring shaped and which is provided coaxially with the driven shaft so as to be able to rotate relative to the driven shaft;

a rotating member which is able to rotate relative to and coaxially with both the prime mover rotating body and the driven shaft;

an urging member which is attached to the prime mover rotating body and rotates together with the prime mover rotating body, and which urges the rotating member in a direction of rotation of the prime mover rotating body;

connecting members which, interlockingly with relative rotation of the rotating member with respect to the prime mover rotating body, mechanically connect the prime mover rotating body and the driven shaft, and transmit rotation of the prime mover rotating body to the driven shaft;

a driving mechanism having an output shaft which is connected one of directly and indirectly to the prime mover rotating body, and the driving mechanism rotates the output shaft by driving force of the driving mechanism; and

a braking mechanism which, interlockingly with rotation of the output shaft, applies frictional force to the rotating member and impedes rotation of the rotating member.

19. The webbing retractor of claim 18, further comprising a rotation transmitting mechanism which is provided between the output shaft and the prime mover rotating body, and which receives rotation from the output shaft and rotates, and which transmits rotation of the rotation transmitting mechanism to the prime mover rotating body.

20. The webbing retractor of claim 19, wherein the braking mechanism includes a friction member which is substantially ring shaped and which is exposed to an exterior of the prime mover rotating body in a state in which the friction member is mechanically connected to the rotating member; and a braking member which is attached to one of the output shaft and the rotation transmitting mechanism, and which, interlockingly with rotation of the one of the output shaft and the rotation transmitting mechanism, moves so as to approach the friction member and slidingly contacts the friction member.